

THAT WHICH IS CLAIMED IS:

1. A method for guiding the selection of a therapeutic treatment regimen for a patient with a known disease or medical condition, said method comprising:

(a) providing patient information to a computing device comprising:

a first knowledge base comprising a plurality of different therapeutic treatment regimens for said disease or medical condition;

a second knowledge base comprising a plurality of expert rules for evaluating and selecting a therapeutic treatment regimen for said disease or medical condition;

a third knowledge base comprising advisory information useful for the treatment of a patient with different constituents of said different therapeutic treatment regimens; and

(b) generating in said computing device a listing of available therapeutic treatment regimens for said patient; and

(c) generating in said computing device advisory information for one or more therapeutic treatment regimens in said listing based on said patient information and said expert rules.

2. A method according to claim 1, further

comprising the steps of:

(d) entering a user-defined therapeutic treatment regimen for said disease or medical condition
5 that is not included in said first knowledge base;

(e) generating in said computing device advisory information for said user-defined combination therapeutic treatment regimen.

3. A method according to claim 1, further comprising the steps of:

(f) entering a non-recommended therapeutic treatment regimen for said disease or medical condition
5 that is included in said first knowledge base but not recommended from said listing; and

(g) generating in said computing device advisory information for said non-recommended therapeutic treatment regimen, said advisory
10 information including at least one reason for non-recommendation of said therapeutic treatment regimen.

4. A method according to claim 1, said patient information comprising gender, age, weight, CD4 information, viral load information, HIV genotype and phenotype information, hemoglobin information,
5 neuropathy information, neutrophil information, pancreatitis, hepatic function, renal function, drug allergy and intolerance information, and information for drug treatments for other conditions.

5. A method according to claim 1, said patient information including prior therapeutic treatment regimen information.

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6. A method according to claim 1, wherein said listing of available therapeutic treatment regimens for said patient comprises a ranked listing of available therapeutic treatment regimens for said patient.

6¹. A method according to claim 1, wherein said patient information includes prior patient information stored in said computing device.

7¹. A method according to claim 1, said advisory information including:
warnings to take the patient off a contraindicated drug before initiating a corresponding therapeutic treatment regimen; and

information clinically useful to implement a corresponding therapeutic treatment regimen.

8¹. A method according to claim 1, wherein said computing device comprises a fourth knowledge base comprising patient therapeutic treatment regimen history, said advisory information including previous therapeutic treatment regimen information extracted from said fourth knowledge base.

9¹. A method according to claim 7¹, wherein said known disease or medical condition is HIV-1 infection, said therapeutic treatment regimen includes antiretroviral drugs, and said therapeutic treatment regimen includes contraindicated or potentially adversely interacting non-antiretroviral drugs.

778 10¹¹ 11. A method according to claim 8⁷, wherein said therapeutic treatment regimen includes a protease inhibitor, and said contraindicated drug is terfenadine.

774 11¹² 12. A method according to claim 8⁷, wherein said therapeutic treatment regimen includes indinavir and said contraindicated drug is cisapride.

774 12¹³ 13. A method according to claim 1, wherein said known disease or medical condition is one where multiple prophylactic or therapeutic treatment regimens are available to be used singly or in combination in the treatment of said disease.

774 13¹⁴ 14. A method according to claim 1, wherein said known disease or medical condition is a cardiovascular disease.

774 14¹⁵ 15. A method according to claim 1, wherein said known disease or medical condition is a pulmonary disease.

774 15¹⁶ 16. A method according to claim 1, wherein said known disease or medical condition is a neurologic disease.

774 16¹⁷ 17. A method according to claim 1, wherein said known disease or medical condition is cancer.

774 17¹⁸ 18. A method according to claim 1, wherein said known disease or medical condition is a urinary

tract infection.

27 19¹⁹ 19. A method according to claim 1, wherein said known disease or medical condition is hepatitis.

27 19²⁰ 20. A method according to claim 1, wherein said known disease or medical condition is HIV-1 infection.

Sub A3 21. A method according to claim 1, wherein said knowledge base comprises a plurality of different combination therapeutic treatment regimens.

27 22²² 22. A method according to claim 1, wherein drug dosage information is recommended and adjusted if necessary depending upon said patient information.

27 22²³ 23. A method according to claim 1, further comprising the step of:

(d) accessing, via said computing device, information for one or more therapeutic treatment regimens from a drug reference source.

Sub A3 24. A system for guiding the selection of a therapeutic treatment regimen for a patient with a known disease or medical condition, said system comprising:

(a) a computing device comprising:

a first knowledge base comprising a plurality of different therapeutic treatment regimens for said disease or medical condition;

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a second knowledge base comprising a plurality of expert rules for selecting a therapeutic treatment regimen for said disease or medical condition;

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a third knowledge base comprising advisory information useful for the treatment of a patient with different constituents of said different therapeutic treatment regimens; and

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(b) means for providing patient information to said computing device;

(c) means for generating in said computing device a listing of therapeutic treatment regimens for said patient; and

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(d) means for generating in said computing device advisory information for one or more therapeutic treatment regimens in said listing based on said patient information and said expert rules.

²⁴~~25~~. A system according to claim ²³~~24~~, further comprising:

5 (e) means for entering a user-defined therapeutic treatment regimen for said disease or medical condition that is not generated or displayed via said first knowledge base;

(f) means for generating in said computing device advisory information for said user-defined combination therapeutic treatment regimen.

26. A system according to claim 24, further comprising:

(f) means for entering a non-recommended

5 therapeutic treatment regimen for said disease or
medical condition that is included in said first
knowledge base but not recommended from said listing;
and

10 (g) means for generating in said computing
device advisory information for said non-recommended
therapeutic treatment regimen, said advisory
information including at least one reason for non-
recommendation of said therapeutic treatment regimen.

5 27. A system according to claim 24, said
patient information comprising gender, age, weight, CD4
information, viral load information, HIV genotype and
phenotype information, hemoglobin information,
neuropathy information, neutrophil information,
pancreatitis, hepatic function, renal function, drug
allergy and intolerance information, and information
for drug treatments for other conditions.

27²⁸. A system according to claim 23²⁴, said
patient information including prior therapeutic
treatment regimen information.

5 29. A system according to claim 24, wherein
said listing of available therapeutic treatment
regimens for said patient comprises a ranked listing of
available therapeutic treatment regimens for said
patient.

28²⁹. A system according to claim 23²⁴, wherein
said patient information includes prior patient
information stored in said computing device.

29²³ 31. A system according to claim 24²³, said advisory information including:

warnings to take the patient off a contraindicated drug before initiating a corresponding therapeutic treatment regimen; and

information clinically useful to implement a corresponding therapeutic treatment regimen.

30²³ 32. A system according to claim 24²³, wherein said computing device comprises a fourth knowledge base comprising patient therapeutic treatment regimen history, said advisory information including previous therapeutic treatment regimen information extracted from said fourth knowledge base.

31²⁹ 33. A system according to claim 31²⁹, wherein said known disease or medical condition is HIV-1 infection, said therapeutic treatment regimen includes antiretroviral drugs, and said therapeutic treatment regimen includes contraindicated or potentially adversely interacting non-antiretroviral drugs.

32²⁹ 34. A system according to claim 31²⁹, wherein said therapeutic treatment regimen includes a protease inhibitor, and said contraindicated drug is terfenadine.

33²⁹ 35. A system according to claim 31²⁹, wherein said therapeutic treatment regimen includes indinavir and said contraindicated drug is cisapride.

34²³ 36. A system according to claim 24²³, wherein

5 said known disease or medical condition is one where multiple prophylactic therapeutic treatment regimens are available to be used singly or in combination in the treatment of said disease or medical condition.

27A ³⁵~~37~~. A system according to claim ²³~~24~~, wherein said known disease or medical condition is a cardiovascular disease.

27A ³⁶~~38~~. A system according to claim ²³~~24~~, wherein said known disease or medical condition is a pulmonary disease.

27A ³⁷~~39~~. A system according to claim ²³~~24~~, wherein said known disease or medical condition is a neurologic disease.

27A ³⁸~~40~~. A system according to claim ²³~~24~~, wherein said known disease or medical condition is cancer.

27A ³⁹~~41~~. A system according to claim ²³~~24~~, wherein said known disease or medical condition is a urinary tract infection.

27A ⁴⁰~~42~~. A system according to claim ²³~~24~~, wherein said known disease or medical condition is hepatitis.

27A ⁴¹~~43~~. A system according to claim ²³~~24~~, wherein said known disease or medical condition is HIV-1 infection.

44. A system according to claim 24, wherein

said knowledge base comprises a plurality of different combination therapeutic treatment regimens.

27 43 45. A system according to claim 23 24, wherein drug dosage information is recommended and adjusted if necessary depending upon said patient information.

27 44 46. A system according to claim 23 24, further comprising:

(e) means for accessing, via said computing device, information for one or more therapeutic treatment regimens from a standard drug reference source.

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5 47. A computer program product for guiding the selection of a therapeutic treatment regimen for a patient with a known disease or medical condition, said computer program product comprising a computer usable storage medium having computer readable program code means embodied in the medium, the computer readable program code means comprising:

10 (a) computer readable program code means for generating a computing device comprising:

15 a first knowledge base comprising a plurality of different therapeutic treatment regimens for said disease or medical condition;

a second knowledge base comprising a plurality of expert rules for selecting a therapeutic treatment regimen for said disease or medical condition;

a third knowledge base comprising

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advisory information useful for the treatment of a patient with different constituents of said different therapeutic treatment regimens; and

(b) computer readable program code means for providing patient information to said computing device;

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(c) computer readable program code means for generating in said computing device a listing of available therapeutic treatment regimens for said patient; and

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(d) computer readable program code means for generating in said computing device advisory information for one or more therapeutic treatment regimens in said listing based on said patient information and said expert rules.

48. A computer program product according to claim 47, further comprising:

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(e) computer readable program code means for entering a user-defined therapeutic treatment regimen for said disease or medical condition that is not generated or displayed via said first knowledge base;

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(f) computer readable program code means for generating in said computing device advisory information for said user-defined combination therapeutic treatment regimen.

49. A computer program product according to claim 48, further comprising:

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(g) computer readable program code means for entering a non-recommended therapeutic treatment regimen for said disease or medical condition that is

included in said first knowledge base but not recommended from said listing; and

10 (h) computer readable program code means for generating in said computing device advisory information for said non-recommended therapeutic treatment regimen, said advisory information including at least one reason for non-recommendation of said therapeutic treatment regimen.

77 48 50. A computer program product according to claim 45, said patient information comprising gender, age, weight, CD4 information, viral load information, HIV genotype and phenotype information, hemoglobin information, neuropathy information, neutrophil information, pancreatitis, hepatic function, renal function, drug allergy and intolerance information, and information for drug treatments for other conditions.

5 49 51. A computer program product according to claim 45, said patient information including prior therapeutic treatment regimen information.

Sub A8 52. A computer program product according to claim 47, wherein said patient information includes prior patient information stored in said computing device.

77 51 53. A computer program product according to claim 45, said advisory information including: warnings to take the patient off a contraindicated drug before initiating a corresponding therapeutic treatment regimen; and

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information clinically useful to implement a corresponding therapeutic treatment regimen.

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54. A computer program product according to claim 47 wherein said computing device comprises a fourth knowledge base comprising patient therapeutic treatment regimen history, said advisory information including previous therapeutic treatment regimen information extracted from said fourth knowledge base.

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55. A computer program product according to claim ~~53~~⁵¹, wherein said known disease or medical condition is HIV-1 infection, said therapeutic treatment regimen includes antiretroviral drugs, and said therapeutic treatment regimen includes contraindicated or potentially adversely interacting non-antiretroviral drugs.

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56. A computer program product according to claim ~~53~~⁵¹, wherein said therapeutic treatment regimen includes a protease inhibitor, and said contraindicated drug is terfenadine.

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57. A computer program product according to claim ~~53~~⁵¹, wherein said therapeutic treatment regimen includes indinavir and said contraindicated drug is cisapride.

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58. A computer program product according to claim ~~47~~⁴⁵, wherein said known disease or medical condition is one where multiple prophylactic therapeutic treatment regimens are available to be used

5 singly or in combination in the treatment of said disease or medical condition.

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45 59. A computer program product according to claim 47, wherein said known disease or medical condition is a cardiovascular disease.

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45 60. A computer program product according to claim 47, wherein said known disease or medical condition is a pulmonary disease.

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45 61. A computer program product according to claim 47, wherein said known disease or medical condition is a neurologic disease.

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45 62. A computer program product according to claim 47, wherein said known disease or medical condition is cancer.

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45 63. A computer program product according to claim 47, wherein said known disease or medical condition is a urinary tract infection.

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45 64. A computer program product according to claim 47, wherein said known disease or medical condition is hepatitis.

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45 65. A computer program product according to claim 47, wherein said known disease or medical condition is HIV-1 infection.

66. A computer program product according to

claim 47, wherein said knowledge base comprises a plurality of different combination therapeutic treatment regimens.

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67. A computer program product according to claim 47, wherein drug dosage information is recommended and adjusted if necessary depending upon said patient information.

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68. A computer program product according to claim 47, further comprising:

(e) computer readable program code means for accessing, via said computing device, information for one or more therapeutic treatment regimens from a standard drug reference source.

69. A computer program product according to claim 47, wherein said listing of available therapeutic treatment regimens for said patient is a ranked listing of available therapeutic treatment regimens for said patient.